

Serial No. 10616580

In the claims:

1. (original) An aqueous coating composition for making an ink-jet recording medium, comprising a dispersion of: a) at least 60% by weight of cationic fumed silica particles, and b) at least 14% by weight of cationic polyurethane resin based on total weight of solids in the composition.
2. (original) The coating composition of claim 1, comprising: a) about 60% to about 86% by weight of cationic fumed silica particles, and b) about 14% to about 40% by weight of cationic polyurethane resin.
3. (original) The coating composition of claim 1, further comprising a water-soluble polymer selected from the group consisting of cationic acrylic polymers and copolymers, acrylic/acrylamide copolymers, polyvinyl alcohol/N-vinylformamide copolymers, and acrylamide polymers.
4. (original) The coating composition of claim 1, further comprising a water-dispersible polymer selected from the group consisting of cationic acrylic polymers and copolymers, cationic styrene/acrylic copolymers, and cationic polystyrene latexes

Serial No. 10616580

5. (original) The coating composition of claim 1, further comprising an additive selected from the group consisting of pigments, surface active agents, anti-static agents, optical brighteners, UV light stabilizers, UV absorbers, defoaming agents, humectants, waxes, and plasticizers.
6. (original) The coating composition of claim 1, wherein the silica particles are primary particles having an average particle size in the range of about 3 nm to about 40 nm.
7. (original) The coating composition of claim 1, wherein the silica particles comprise about 99.5% by weight silica and about 0.005% to about 0.5% by weight alumina.
8. (original) The coating composition of claim 1, wherein the composition has a pH in the range of about 3.0 to about 7.0.
9. (original) The coating composition of claim 1, wherein the composition has a zeta potential of at least 20 mV.
10. (original) An ink-jet recording medium, comprising a substrate coated with an ink-receptive layer comprising: a) at least 60% by weight of cationic fumed silica particles, and b) at least 14% by weight of cationic polyurethane resin based on total dry weight of the ink-receptive layer.

Serial No. 10616580

11. (original) The ink-jet recording medium of claim 10, wherein the substrate is a paper.
12. (original) The ink-jet recording medium of claim 11, wherein the substrate is a porous paper having water absorption as measured per a Cobb TAPPI Test Method T441 in one minute in the range of about 20 to about 100.
13. (original) The ink-jet recording medium of claim 11, wherein the paper is a matte paper having a gloss in the range of about 2 to about 10.
14. (original) The ink-jet recording medium of claim 11, wherein the paper has a base weight in the range of about 70 to about 260 g/m².
15. (original) The ink-jet recording medium of claim 10, wherein the weight of the weight of the ink-receptive layer is in the range of about 5 to about 40 g/ m².
16. (original) An ink-jet recording medium, comprising a substrate coated with a) an ink-receptive underlayer comprising a pigment and a polymer selected from the group consisting of a water-soluble and water dispersible polymer, and b) an ink-receptive top layer comprising: a) at least 60% by weight of cationic fumed silica particles, and b) at least 14% by weight of cationic polyurethane resin based on total dry weight of the top layer.

Serial No. 10616580

17. (original) The ink-jet recording medium of claim 16, wherein the ink-receptive underlayer comprises pigment and a water-soluble polymer selected from the group consisting of poly(vinyl alcohol), poly(vinyl pyrrolidone); poly(2-ethyl-2-oxazoline), modified starch cellulose; and cellulose derivatives, and mixtures thereof.
18. (original) The ink-jet recording medium of claim 16, wherein the ink-receptive underlayer comprises polyvinyl alcohol and silica.
19. (original) The ink-jet recording medium of claim 16, wherein the ink-receptive underlayer comprises pigment and a water-dispersible polymer selected from the group consisting of acrylates; methacrylates; polyvinyl acetate; vinyl acetate copolymers, polystyrene; styrene copolymers; polyesters; vinyl-acrylic terpolymers, polyacrylonitrile; acrylonitrile copolymers, polyurethanes; and mixtures thereof.
20. (original) The ink-jet recording medium of claim 16, wherein the substrate is a paper.
21. (original) The ink-jet recording medium of claim 16, wherein the weight of the ink-receptive underlayer is in the range of about 5 to about 20 g/ m² and the weight of the ink-receptive top layer is in the range of about 5 to about 40 g/ m².
22. (original) The ink-jet recording medium of claim 16, wherein the paper is a substantially impermeable paper having a polymeric moisture barrier coating.

Serial No. 10616580

23. (original) The ink-jet recording medium of claim 16, wherein the substrate is a polymeric film comprising a polymer selected from the group consisting of polyesters, polycarbonates, polyethylene, polypropylene, polyvinyl chloride, polystyrene, polyacrylics, polyacetals, ionomers, and mixtures thereof.

24. (original) The ink-jet recording medium of claim 16, wherein the substrate is a metal foil.

25. (original) The ink-jet recording medium of claim 16, wherein the substrate is a metal-coated material.

26 - 29. (canceled)